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By reading and following these instructions carefully, you will gain a better understanding of dry eye. It is indeed a pleasure to provide this reinforcement of our care.

DRY EYE

DRY EYE SYNDROME (DES)

Problematic dry eyes are one of the most common problems reported to eye doctors. Dry eyes result from either a decrease in the amount of tear production or the quality/composition of the tears produced. Common causes may include advancing age, allergies, poor diet, heating/cooling environmental circumstances, hormonal changes, contact lens use, computer use, history of LASIK surgery, and health status such as diabetes, arthritis, lupus, thyroid dysfunction, chemotherapy/radiation treatments, and acne rosacea. In addition certain medications can contribute to dry eye symptoms such as antidepressants, antihistamines, decongestants, acne treatments, diuretics and some blood pressure medications.

Common symptoms of dry eyes may include blurred or fluctuating vision, sensitivity to light, dryness, burning, stinging, gritty or foreign body sensations. Occasionally, the dry eye patient may experience a paradoxical excess or "reflex" tearing caused by the underlying eye surface irritation.

Treatment of this condition may include **artificial tears, gels and/or lubricating ointments at bedtime, daily eyelid hygiene massage procedures, warm compresses, a prescribed medication regime, Omega-3 essential fatty acid nutritional supplements (fish and flaxseed oil), and punctal (tear drainage) occlusion of the eyelid to retain moisture.**

As you can see the causes and possible treatment options are complex. An individual treatment plan will be formulated for you based on severity and known causes.

POSTERIOR BLEPHARITIS - MEIBOMITIS

Meibomian glands located along the eyelash margin supply the essential oily component of the normal tear film. If these glands become blocked, inflammation or infection may follow called "meibomitis." Blockage of the glands may be due to altered lipid production or excessive eye make-up.

Treatment may include manual expression of the glands, lid cleansing, warm compresses, and topical medications depending on the severity of the disease. Certain oral antibiotics may be used as a short or long term treatment in certain cases. Diet supplementation with omega-3 fatty acids may also be beneficial.

TEAR FILM BREAKUP

The formation of the surface layer of tears that coats and protects the front of the eye is a complex process. The natural tear is comprised of watery tears and oils that combine to produce a multilayered tear film. If the amount or the chemistry of this tear film is compromised, it results in symptoms of chronic discomfort.

If the tear layer does not stay intact, it will not protect your eye adequately between blinks. This then leaves small areas on the front of the eye, the cornea, unprotected and susceptible to chronic irritation. If contact lenses are worn, excessive symptoms of discomfort or intolerance to the contacts can arise.

TEARING DUE TO DRY EYE

Paradoxically, the most common cause of excess tearing is a dry eye. In extreme dryness, the surface of the eye becomes irritated. A reflex or uncontrolled tearing then attempts to compensate by

flooding the eye with watery tears. This is the same type of tearing you experience when exposed to irritants such as peeling onions or having sand blown in your eyes.

Treatment for this sort of tearing is the same as for other forms of dry eye syndrome. Artificial tears may be used frequently to lubricate the surface. Nutritional supplements and special medications can also increase normal tear production.

ARTIFICIAL TEARS

The initial treatment for mild dry eyes is the frequent use of artificial tears. You should use these artificial tears often enough to make your eyes feel better. Some drops are thicker or more viscous than others. These can provide longer relief but may cause transient blurring of your vision.

Not all artificial tears are created equal. We will recommend specific artificial tear preparations that will best suit your individual situation.

DRY EYE MEDICATIONS

While artificial tears can reduce dry eye symptoms, they do not cure the underlying dry eye condition. Special medications and nutritional supplements can actually make your eyes produce more tears.

Special medications can condition tear producing cells to produce a higher quantity and quality of tears. These medications act slowly, often over many months. The longer they are used the better their effect. These medications are very safe used over long periods of time.

Certain nutrients can also increase the quantity and quality of tears. Specifically, these include omega fatty acids and antioxidants. It is difficult to achieve therapeutic levels of these nutrients in the diet so supplementation is usually necessary. We can recommend specific products for this supplementation.

TEAR DRAIN OCCLUSION

Tear duct or punctal occlusion prevents the tears from escaping through the drainage ducts. As a result, your own natural tears along with any added artificial tears and/or medications are able to stay in contact with your eye longer. This provides greater comfort and treatment.

It is common to first try a temporary occlusion of these ducts. Temporary occlusion with plugs that dissolve over 5-10 days is an experiment to see how effective a more permanent occlusion would bring. If successful, a permanent plug may be placed in the drains. Even with the permanent occlusion procedure, patients generally need to use artificial tears or other medications to treat this chronic condition.

POSSIBLE DRY EYE THERAPY

1. Artificial Tears used several times a day. We may give you some samples.
2. Warm Compresses: One time a day use tap water to heat a wash cloth and apply that to your closed eyelids for 5-10 minutes.
3. Baby Shampoo. It doesn't sting! Close your eyes and gently massage the shampoo along the eyelid margins and then rinse.
4. Stay hydrated. Drink plenty of water.
5. Omega Three Fatty Acid, 2-3 thousand milligrams per day. Check with your doctor before you begin an omega three regimen. Fish or Flaxseed Oil are good sources. Find the oils in triacylglyceride form (TG).
6. If your eyes are dry when you wake up then it may be necessary to use an ointment that you place inside your lower lids at bedtime. This is available over the counter as Refresh PM., Genteal Gel or Systane Night Time.
7. Prescription for Restasis.
8. Punctal occlusion.

This eye care report is provided as an advanced level of service. If you have any questions or persistent visual/ocular symptoms after reading this report, please contact our office immediately. Thank you for allowing us to participate in your care.

